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IMPROVED MASSAGING DEVICE FOR CHAIRS

CROSS-REFERENCE TO RELATED APPLICATION

5 *now U.S. Patent No. 6,814,710* This application is a continuation-in-part of patent application 09/632,315 filed
on August 4, 2000, and which claims the benefit of U.S. Provisional Application No. 60/148, 929, filed August 5, 1999, the disclosures of each of which are hereby incorporated by reference.

FIELD OF THE INVENTION

10 The present invention relates to massaging devices, and more particularly, to massaging devices utilizing a greaseless rail system, and/or non-rotary massaging members.

BACKGROUND OF THE INVENTION

15 Certain custom-built massaging chairs known in the art include a massaging device for performing massaging functions. One type of massaging device is shown in PCT International Application No. PCT/JP99/01340, filed March 17, 1999, by Shimizu Nobuzo. The massaging device used in such chairs includes a track, a massage wheel driving mechanism slidably coupled to the track, and a pair of rotating massage wheels, which are attached to the drive mechanism and translated along the track. The track forms two C-shaped rails. One or more guide wheels having a generally flat circumferential surface are coupled to each side of the driving mechanism. The wheels on each side of the mechanism are fitted within a corresponding rail. Grease is typically applied within the rails to reduce friction between the wheel sides and the rails. The driving mechanism is electrically coupled via electrical wires to a controller that provides the appropriate signal to a motor for driving the mechanism back and forth along the rails. The controller is coupled to a selection device for allowing the user of the massaging chair to turn the motor on and off and to select the speed of the movement of the massaging wheels. The driving mechanism generally includes a limit switch, which controls the motion of the driving mechanism along the rails.

Each massaging wheel is coupled to the driving mechanism about a rotary shaft. The massage wheels are mounted to the rotary shaft eccentrically, and in an oblique fashion relative to the spin axis of the shaft. A second motor rotates the massaging wheels. The wheels are mounted eccentrically and obliquely relative to the spin axis, allowing the outer-peripherals of the massaging wheels to move from side-to-side in a